

Notice of Allowability

Application No.

10/781,817

Examiner

Con P. Tran

Applicant(s)

HSU, TIEN-MING

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 8/31/07.
2. ☒ The allowed claim(s) is/are 1-9.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER

DETAILED ACTION

Allowable Subject Matter

3. **Claims 1-9** are allowed.

The following is an examiner's statement of reasons for indicting allowable subject matter:

Regarding independent **claim 1**, the prior art fails to teach or suggest a sound pickup method to be implemented using a microphone array that includes a plurality of microphones disposed in an array and spaced apart from each other, and a sound source tracking device that is disposed at determined distances relative to the microphones in the microphone array, the sound pickup method comprising the steps c) determining appropriate time delays for the nearest one of the microphones according to the distance thereof from the farthest one of the microphones and for other ones of the microphones in the microphone array according to the distance of each of said other ones of the microphones from the nearest one of the microphones; and d) processing signals generated by the microphones in the microphone array by introducing the corresponding time delays determined in step c) into the signals from the microphones, in combination with other limitations, as specified in the independent claim 1.

Regarding independent **claim 5**, the prior art fails to teach or suggest a signal processing unit coupled to said microphone array and said sound source tracking device, said signal processing unit including a delay calculator for determining

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appropriate time delays for the nearest one of said microphones according to the distance thereof from the farthest one of said microphones and for other ones of said microphones in said microphone array according to the distance of each of said other ones of said microphones from the nearest one of said microphones, said signal processing unit further including a delay processor for processing signals generated by said microphones in said microphone array by introducing the corresponding time delays determined by said delay calculator into the signals from said microphones, in combination with other limitations, as specified in the independent claim 5.

Claims 2-4 are allowed by virtue of their dependency on claim 1.

Claims 6-9 are allowed by virtue of their dependency on claim 5.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Con P. Tran whose telephone number is (571) 272-7532. The examiner can normally be reached on M - F (8:30 AM - 5:00 PM).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Vivian C. Chin can be reached on (571) 272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cpt CPJ
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VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3200